

**Response to Comments on Public Notice NPDES Permit and Final Determination  
for the Marine Corps Base Hawaii Kaneohe Bay Water Reclamation Facility  
NPDES Permit No. HI 0110078  
April 16, 2014**

**Comments received on February 27, 2014 from US Marine Corps Base Hawaii**

1. NPDES Permit, Part A.2, Interim Effluent Limitations for Chlordane at Outfall Serial 001

- a. According to the Fact Sheet, Page 18, the determination of reasonable potential to exceed water quality was based on 4 chlordane samples taken over the previous permit term compared against the most stringent water quality standard for chlordane of 0.00016 µg/l. A review of Hawaii Administrative Rules 11-54, indicates the 0.00016 µg/l limitation is based on the fish consumption standard for the protection of human health. According to HAR 11-54, for the protection of human health, all State Waters shall be free from pollutants in concentrations which on average during any 12 month period, exceed the “fish consumption” standard for pollutants identified as carcinogens.

Since the “fish consumption” standard was intended to be applied to an annual average, we believe there is not enough data to definitively determine reasonable potential. Although the rules may define that a single sample taken in a given year would be considered an annual average and therefore, the 4 chlordane samples obtained during the previous permit cycle could be used in a reasonable potential analysis, the accuracy of the result would be questionable at best due to the fact that each of the annual averages for chlordane was a single sample. Further since the fish consumption standard was intended to be applied to an annual average, the use of an average dilution should be used in the determination of reasonable potential vice the critical minimum dilution that was used. It is our understanding that the CCH has provided a new dilution study for the outfall which provides an average dilution for the outfall which should have been used. For these reasons, we believe the imposition of Chlordane limitations and the associated compliance schedule should not be included in this permit but we do support the increased monitoring which will allow for a more accurate calculation of reasonable potential in our next permit cycle.

**Response:** A determination of reasonable potential is not a finding of non-compliance, it simply identifies the potential of a pollutant in the effluent to exceed water quality objectives for which effluent limitations and monitoring requirements are necessary. The reasonable potential analysis used to determine whether there is reasonable potential for chlordane to exceed water quality standards was calculated using methods described in Section 3.3.2 of EPA's Technical Support

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Document (TSD). This approach combines knowledge of effluent variability as estimated by a coefficient of variation with the uncertainty due to a limited number of data to project an estimated maximum concentration for the effluent. EPA's statistical approach compares the projected maximum receiving water concentration (RWC) to the applicable standard (criteria maximum concentration = chronic aquatic life, criteria continuous concentration = acute aquatic life, or reference ambient concentration = human health). EPA's recommendation is that there is reasonable potential when the projected RWC is greater than an ambient criterion.

In addition, comparison of the projected maximum chlordane RWC (0.019 µg/L, accounting for dilution) with the less conservative chronic saltwater water quality standard of 0.004 µg/L would still result in exceeding the WQS, demonstrating reasonable potential. The chronic saltwater standard is intended to be applied on a 24 hour period (versus annual average).

The effluent limitation was set based on the State Toxics Control Program (STCP) as described in the Fact Sheet. The STCP states that the minimum dilution factor should be used for non-carcinogens and the average dilution for carcinogens. However, since only a minimum dilution was provided at the time of the permit processing, the minimum dilution was used since it is more conservative than average dilution and will still be protective of water quality.

It is the responsibility of the Permittee to ensure that all necessary and pertinent information for the reissuance of the permit is submitted with the NPDES permit renewal application, including any dilution analysis to be considered during the permitting effort. Any dilution study to be considered should have been submitted with the renewal application at least 180 days prior to the expiration of the current permit. The DOH did not consider the new dilution at the time of permit processing as it had not been submitted. The permit was drafted on the best available information provided at the time of permitting in order for the processing of this permit to progress in a timely manner. If applicable, the MCBH may request a modification to this permit where new information can be considered and incorporated, as applicable.

- b. If removal of chlordane limitations is not possible, it is proposed that the compliance schedule be extended 5 years to allow for monthly sampling of chlordane. At that time, the 5 yearly averages for chlordane could be calculated and the reasonable potential analysis could be performed. Depending on the results of this analysis, the permit may remain, as if limitations are required and compliance cannot be immediately met, modified to remove the compliance

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schedule if limitations are required but can be immediately met or modified to remove chlordane limitations if limitations are not required. Extending the schedule 5 years for data collection would also serve to provide more and better information which can be used in identification and evaluation of reasonable treatment alternatives should the need for treatment be required (Item 2 of the Compliance Schedule for Chlordane). As currently written, the study would need to rely heavily on the single sample yearly samples taken during the previous permit term which as explained above is extremely inaccurate and may lead to inappropriate treatment recommendations.

**Response:** In response to public comments received, the DOH sent out a letter to the MCBH requesting information to enable the DOH to incorporate appropriate schedules of compliance to meet the applicable Water Quality Based Effluent Limitations (WQBELs) in the proposed NPDES permit. On November 27, 2013 the DOH received the MCBH response containing this information. The DOH used the information provided by the discharger, including the incorporation of time frames provided by the MCBH to develop the compliance schedules contained in the revised NPDES permit.

The compliance schedule can be adjusted based on new information, if applicable and appropriate. In the absence of new information, the DOH must have an enforceable compliance schedule in place for the permit to be consistent with the CWA and NPDES regulations.

**2. Fact Sheet, Part D.2.d, Chlordane**

The second paragraph on Page 20 states, "During the compliance schedule, the Permittee is required to maintain current treatment capability. Interim effluent limitations for chlordane have been established until final effluent limitations become effective. Interim limitations have been established based on effluent data from January 2008 through December 2011" It is our contention that DOH erred in its reasoning that establishing interim permit limitations based on past data would indicate that the Permittee is maintaining current treatment capability. Since MCBH Kaneohe Bay WRF does not have a treatment process for removing chlordane, maintaining current treatment capability will not ensure levels of chlordane will not increase. For this reason it is proposed that the current interim limitations be changed to monitor only.

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**Response:** DOH recognizes that MCBH Kaneohe Bay WRF does not have a specific treatment process for removing chlordane. However, interim effluent limitations are a requirement for a compliance schedule and are based on current facility capabilities. Without a compliance schedule (and interim effluent limitations) the Discharger would be in immediate noncompliance with end-of-pipe limits for chlordane. The intent of the interim effluent limitation is to ensure the current performance of the facility is maintained. The maximum chlordane effluent concentration (from January 2008 to December 2012) was not used as the basis for the interim daily maximum limit, as this value is equal to the final effluent limit and there were only a limited number of effluent data points. Consistent with guidance provided in EPA's TSD, interim daily maximum limit was calculated based on the 99<sup>th</sup> percentile of an assumed lognormal distribution (resulting in a limit 4.7 times higher than the maximum chlordane effluent concentration reported from 2008 to 2012). DOH finds that the current interim effluent limitation is representative of current facility operations, as the Discharger would have 100% compliance with the current interim effluent limitations based on the data from January 2008 to December 2012. Interim effluent limitations ensure that further degradation of the receiving water does not occur over the term of the proposed permit.

3. Fact Sheet, Part D.2.i, Enterococcus

The third paragraph on Page 27 states, "During the compliance schedule, the Permittee is required to maintain current treatment capability. Interim effluent limitations for enterococcus have been established until final limitations become effective. Interim effluent limitations have been developed based on observed effluent data over the recent permit term." It is our contention that DOH erred in its reasoning that establishing interim permit limitations based on past data would indicate that the Permittee is maintaining current treatment capability. Since MCBH Kaneohe Bay WRF does not have the capability to provide disinfection, maintaining current treatment capability will not ensure levels of enterococcus will not increase. For this reason it is proposed that the current interim limitation be changed to monitor only.

**Response:** DOH recognizes that MCBH Kaneohe Bay WRF does not have a specific treatment process for removing enterococcus. However, interim effluent limitations are a requirement for a compliance schedule and are based on current facility capabilities. Without a compliance schedule (and interim effluent limitations) the Discharger would be in immediate noncompliance with end-of-pipe limits for

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enterococcus. The intent of the interim effluent limitation is to ensure the current performance of the facility is maintained. The maximum enterococcus effluent concentration (from January 2009 to March 2012) was used as the basis for the interim daily maximum limit. A single sample maximum effluent limitation has been established equal to the maximum effluent concentration (250,000 µg/L) and a monthly geomean effluent limitation has been established based on the highest observed monthly geomean (43,691 µg/L). DOH finds that the current interim effluent limitation is representative of current facility operations, as the Discharger would have 100% compliance with the current interim effluent limitations based on the data from January 2009 to March 2012. Interim effluent limitations ensure that further degradation of the receiving water does not occur over the term of the proposed permit.

4. NPDES Permit, Part A.1, Effluent Limitations and Monitoring Requirements

- a. Ammonia Nitrogen Limitations – Fact Sheet, Part D.2.e, Ammonia Nitrogen – The third paragraph on Page 22 indicates that performance based effluent limitations have been established for Ammonia Nitrogen based on the best estimate of the treatment performance for the Facility for Ammonia Nitrogen. The MCBH WRF is not designed to treat for ammonia nitrogen and has little control over the level of this pollutant in the effluent. The level of ammonia nitrogen is affected more by factors such as influent levels, flow and temperature rather than the actual treatment performance of the plant in terms of BOD and TSS removal. For these reasons, the application of performance based effluent limitations for Ammonia Nitrogen is not appropriate.

**Response:** As stated in the Fact Sheet, reasonable potential to exceed applicable WQS for ammonia nitrogen has been established. Where reasonable potential has been determined for Section 11-54-6(b)(3) pollutants, limitations must be established that are protective of water quality. Because the dilution at the edge of the ZOM is not known, end-of-pipe water-quality based effluent limitations cannot be determined. Thus, where assimilative capacity exists this permit establishes limitations for Section 11-54-6(b)(3) pollutants as performance-based effluent limitations and receiving water limitations and requires the Permittee to conduct a dilution analysis at the edge of the ZOM so that end-of-pipe effluent limitations may be established during future permitting efforts. The performance-based effluent limitations were based on data from January 2009 through March 2012 using the maximum concentration of ammonia plus organic nitrogen (see Page 22,

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Section D.2.e of Fact Sheet). DOH finds that the current effluent limitation is representative of current facility operations, as the Discharger would have 100% compliance with the current effluent limitations based on the data from January 2009 to March 2012. The intent of performance-based effluent limitations ensure that the current performance of the facility is maintained and that further degradation of the receiving water does not occur over the term of the proposed permit. Alternatively, the permit would have had to apply the standard directly at the end-of-pipe.

- b. Nitrate plus Nitrite Limitations – Fact Sheet, Part D.2.f, Nitrate plus Nitrite Nitrogen – The second and third paragraphs on Page 24 indicates that performance based effluent limitations for nitrate plus nitrite nitrogen are established based on maximum effluent concentration over the previous term. The MCBH WRF does not designed to remove nitrate plus nitrite nitrogen and has little control over the levels of these pollutants in the effluent. The level of nitrate plus nitrite nitrogen is affected more by factors such as influent levels, flow and temperature rather than the actual treatment performance of the plant in terms of BOD and TSS removal. For these reasons, the application of performance based effluent limitations for nitrate plus nitrite nitrogen is not appropriate.

**Response:** As stated in the Fact Sheet, reasonable potential to exceed applicable WQS for nitrate plus nitrite nitrogen has been established. Where reasonable potential has been determined for Section 11-54-6(b)(3) pollutants, limitations must be established that are protective of water quality. Because the dilution at the edge of the ZOM is not known, end-of-pipe water-quality based effluent limitations cannot be determined. Thus, where assimilative capacity exists this permit establishes limitations for Section 11-54-6(b)(3) pollutants as performance-based effluent limitations and receiving water limitations and requires the Permittee to conduct a dilution analysis at the edge of the ZOM so that end-of-pipe effluent limitations may be established during future permitting efforts. The performance-based effluent limitations were based on data from January 2008 through July 2013 using the maximum observed concentration for nitrate plus nitrite nitrogen. DOH finds that the current effluent limitation is representative of current facility operations, as the Discharger would have 100% compliance with the current effluent limitations based on the data from January 2008 to July 2013. The intent of performance-based effluent limitations ensure that the current performance of the facility is maintained and that further degradation of the receiving water does not

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occur over the term of the proposed permit. Alternatively, the permit would have had to apply the standard directly at the end-of-pipe.

5. NPDES Permit, Part A.1, Table 2, Compliance Schedule for Chlordane

- a. Item 7 of Table 2 requires submittal of a status report on compliance or noncompliance with the compliance schedule annually by January 1 and 14 days prior to each interim date. As written this would essentially require the submittal of two status reports per year except for years 3, 4 and 5. For example, if the permit becomes effective on April 1, 2014, a status report would be required by January 1, 2015 as well as March 17, 2015 and again on January 1, 2016 and March 17, 2016. Maybe this could be rewritten to require submittal of status reports 14 days prior to any interim date or January 1 for any year without an interim date but no earlier than 1 year prior to permit issuance.

**Response:** Permit has been revised to require the submittal of status reports 14 days prior to each interim date and by January 1<sup>st</sup> of each year for any year without an interim compliance date (i.e., years 3, 4, 5, and 8). The first status report shall be submitted 14 days prior to the Task 1 compliance date.

- b. Request written notification of compliance or noncompliance with interim dates be changed from 14 days prior to interim date to 14 days following the interim date. Per your Response to Comments, Comment 4.b, Page 4 which actually involved the compliance schedule for Ammonia Nitrogen which was the only Compliance Schedule in the previous public noticed permit, HAR 11-55-22 requires that before or up to 14 days following each interim date, the permittee provide written notice of the permittee's compliance or noncompliance with the interim dates.

**Response:** The written notification of compliance or noncompliance with interim dates shall remain at 14 days prior to the interim date. This timeframe was selected to be consistent with other NPDES permits issued.

6. NPDES Permit, Part A.1, Table 3, Compliance Schedule for Enterococcus

- a. Item 7 of Table 2 requires submittal of a status report on compliance or noncompliance with the compliance schedule annually by January 1 and 14 days prior to each interim date. As written this would essentially require the submittal of two status reports per year except for years 3, 4, and 5. For example, if the permit becomes effective April 1, 2014, a status report would be

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**Response:** Permit has been revised to require the submittal of status reports 14 days prior to each interim date and by January 1<sup>st</sup> of each year for any year without an interim compliance date (i.e., years 3, 4, 5, and 8). The first status report shall be submitted 14 days prior to the Task 1 compliance date.

- b. Request written notification of compliance or noncompliance with interim dates be changed from 14 days prior to interim date to 14 days following the interim date. Per your Response to Comments, Comment 4.b, Page 4 which actually involved the compliance schedule for Ammonia Nitrogen which was the only Compliance Schedule in the previous public noticed permit, HAR 11-55-22 requires that before or up to 14 days following each interim date, the permittee provide written notice of the permittee's compliance or noncompliance with the interim dates.

**Response:** The written notification of compliance or noncompliance with interim dates shall remain at 14 days prior to the interim date. This timeframe was selected to be consistent with other NPDES permits issued.

7. NPDES Permit, Page 20, Part E.1, ZOM Dilution Study

This portion of the permit requires the Permittee to conduct a ZOM dilution study within 3 years of the effective date of the permit. Our comments to the draft permit requested this item be removed since the City and County of Honolulu (CCH) is already conducting a ZOM Dilution Study on this outfall which is owned by CCH. The DOH responded, "the Permittee may independently or in cooperation with CCH, conduct the required study." Request wording be added to the permit to indicate or acknowledge that the outfall is a shared outfall and the ZOM Dilution Study can be done independently or in conjunction with CCH and that duplicate submittals are not required.

**Response:** The permit language shall remain, as it is the individual responsibility of each permittee to provide complete and timely submittals for their permit regardless of who conducts the study. Page 4 of the Fact Sheet identifies the



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Mokapu Outfall as a joint outfall shared by the Kailua Regional Wastewater Treatment Plant.

8. NPDES Permit, Page 20, Part E.2, Annual Receiving Water Monitoring

This portion of the permit requires the Permittee to submit an annual receiving water monitoring report by March 31 of each year. Our comments to the draft permit explained that we do not own the outfall and pay CCH for use of the outfall and that CCH performs the water quality monitoring and reporting for the shared outfall. The DOH responded, "The ownership of the outfall is not germane to the necessity to evaluate the impact of the discharge on the receiving water. The Permittee may individually or in conjunction with CCH conduct the necessary receiving water monitoring necessary to demonstrate that the discharge of effluent is not significantly or negatively impacting the aquatic life and human health within the receiving water." Request wording be added to the permit to indicate or acknowledge that the outfall is a shared outfall and the receiving water monitoring can be done independently or in conjunction with CCH and that duplicate submittals are not required.

**Response:** The permit language shall remain, as it is the individual responsibility of each permittee to provide complete and timely submittals for their permit regardless of who performs the monitoring/develops the report. Page 4 of the Fact Sheet identifies the Mokapu Outfall as a joint outfall shared by the Kailua Regional Wastewater Treatment Plant.

9. NPDES Permit, Page 20, Part E.3, Ocean Outfall Monitoring

This portion of the permit requires the Permittee to inspect the ocean outfall and submit investigative findings to the Director at least once during the permit period. Our comments to the draft permit requested this item be removed since the City and County of Honolulu (CCH) is the owner of the outfall and is required to conduct this inspection as a part of their permit. The DOH responded, "The ownership of the outfall is not germane to the necessity to evaluate the impact of the proper operation of the diffuser. The Permittee may individually, or in cooperation with CCH, conduct the necessary receiving water monitoring necessary to demonstrate that the diffuser is in good working order." Request wording be added to the permit to indicate or acknowledge that the outfall is a shared outfall and inspection of the ocean outfall can be done independently or in conjunction with CCH and that duplicate submittals on finding are not required.

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**Response:** The permit language shall remain, as it is the individual responsibility of each permittee to provide complete and timely submittals for their permit regardless of who conducts the inspection. Page 4 of the Fact Sheet identifies the Mokapu Outfall as a joint outfall shared by the Kailua Regional Wastewater Treatment Plant.

10. Response to Comments, Comment 4.b, Page 4

Your response to our comment requesting written notification of compliance or noncompliance with interim dates be changed from 14 days prior to interim date to 28 days after interim date was that HAR 11-55-22 requires that before or up to 14 days following each interim date, the permittee provide written notice of the permittee's compliance or noncompliance with the interim dates. Request written notification of compliance or noncompliance with interim dates be changed from 14 days prior to interim date to 14 days following the interim date for the compliance schedules for Chlordane and Enterococcus (NPDES Permit, Part A.1, Tables 2 and 3).

**Response:** The written notification of compliance or noncompliance with interim dates shall remain at 14 days prior to the interim date. This timeframe was selected to be consistent with other NPDES permits issued.

11. NPDES Permit, Appendix 1

Rather than specifying a particular Analytical Method for the various parameters, it is requested that more general wording such as "As specified in 40 CFR 136" be used. This wording was included in the City and County of Honolulu's recently issued NPDES Permit HI 0021296 for the Kailua Regional Wastewater Treatment Plant. The use of "As specified in 40 CFR 136" would allow MCBH to explore potentially more appropriate methods with less interferences or lower detection limits which may become approved by EPA during the term of the permit.

**Response:** Permit has been revised to state, "As specified in 40 CFR 136."

12. NPDES Permit, Page 11, Part B.2, Chronic Toxicity Test Species Methods

MCB Hawaii believes that using Trypnuestes gratilla for chronic toxicity compliance will lead to unreliable results due to Trypnuestes gratilla sensitivity and inconsistent lab interpretation of the test method. MBC Hawaii WRF has consistently met chronic toxicity limitations when using Ceriodaphnia dubia, but has experienced

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very inconsistent results when using *Trypneustes gratilla*. Most recently, *Trypneustes gratilla* results went from consistently passing to consistently failing when a new lab began performing the test. For this permit iteration MCB Hawaii requests that *Ceriodaphnia dubia* be used for chronic toxicity compliance, and *Trypneustes gratilla* used for chronic toxicity reporting and accelerated testing purposes only.

**Response:** As documented in the Fact Sheet, based on whole effluent toxicity data between January 2009 and March 2012, there is no reasonable potential for *Ceriodaphnia Dubia* to exceed the whole effluent toxicity limitations. Therefore testing requirements for *Ceriodaphnia Dubia* were removed.

The use of *T. gratilla* is appropriate because it is a local species that has demonstrated sensitivity to toxicity present effluents discharged in Hawaii. The narrative toxicity limitation contained in HAR 11-54-4 requires all waters shall be free of substances attributable to domestic, industrial, or other controllable sources of pollutants, including: toxic substances at levels or in combinations sufficient to be toxic or harmful to human, animal, plant, or aquatic life. To evaluate compliance with this requirement, HAR 11-54-4(b) establishes the use of whole effluent toxicity testing. To ensure the protection of aquatic life from toxic substances, a species sensitive to toxicity should be selected. The use of a robust species does not ensure compliance with the narrative toxicity standard established in HAR 11-54. *T. gratilla*'s sensitivity to toxicity within effluents, combined with it being a local species, is exactly what makes the selection of *T. gratilla* appropriate for evaluating compliance with the applicable water quality standards. The use of *T. gratilla* is continued in the proposed permit.

Also, see response to comment #7 from the City and County of Honolulu.

**Comments received on February 28, 2014 from the City and County of Honolulu**

**FACT SHEET**

1. Page 5, Part B.4

As the Fact Sheet, page 5, acknowledges "CWA Section 303(d) requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources." The Pacific Ocean off the Mokapu Peninsula is not identified in the Clean Water Act, Section 303(d) list of impaired water bodies in either the 2008/2010 State of Hawaii Water Quality Monitoring and Assessment Report or the 2012 State of

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Hawaii Water Quality Monitoring and Assessment Report approved on September 20, 2013 by EPA. Additionally, the statement regarding the water impairment status of the southern region of Kaneohe Bay is irrelevant since this water is remotely distant from the Mokapu Outfall discharge.

**Response:** The Fact Sheet has been updated to state that the Pacific Ocean off of Mokapu Peninsula is not specifically listed in the 2012 303(d) list. The paragraph regarding the southern region of Kaneohe Bay has been removed.

2. Page 12, Part D.2.c(3), and Pages 17-20 Part D.2.d(3)  
Using the minimum dilution in the absence of an average dilution for the calculation of effluent limitations for human health standards for carcinogens such as chlordane is flawed.

The State Toxics Control Program: Derivation of Water Quality-Based Discharge Toxicity Limits for Biomonitoring and Specific Pollutants (hereinafter, STCP) identifies the procedures for calculating permit limitations for specific toxic pollutants for the protection of aquatic life and human health. The STCP states that the average dilution value is used when comparing toxic pollutants in effluent discharges through a submerged outfall to numeric human-health fish consumption standards for carcinogens. This guidance was not used to determine effluent limitations in the permit.

The outfall dilution analyses conducted by the City's consultant HDR/HydorQual which was submitted to DOH via letter dated October 22, 2013 provides the appropriate average dilution value.

The water quality criterion for chlordane was based on human health using carcinogenic endpoints in the calculation. This calculation is conservative in terms of cancer potency and bioconcentration factors.

On June 16, 2009, the Governor of the State of Hawaii signed legislation that conforms the State Water Quality Standard for chlordane to the current federal standard set forth in the latest EPA National Recommended Water Quality Criteria (Office of Science and Technology, 2002 & 2006) which incorporate over 20 years of nationwide scientific research concerning the carcinogenicity of toxic pollutants. This amendment was adopted by the Hawaii State Department of Health in December 2009, approved by the Governor on January 25, 2010 and submitted to

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the EPA for approval in February 2010. Ignoring DOH's rule making and the State's position on water quality standards to develop water quality based effluent limits for chlordane is not justifiable.

**Response:** The effluent limitation was set based on the State Toxics Control Program (STCP) as described in the Fact Sheet. The STCP states that the minimum dilution factor should be used for non-carcinogens and the average dilution for carcinogens. However, since only a minimum dilution was provided at the time of the permit processing, the minimum dilution was used since it is more conservative than average dilution and will still be protective of water quality. Without a known dilution, the limit would have had to be applied directly at the end-of-pipe.

It is the responsibility of the Permittee to ensure that all necessary and pertinent information for the reissuance of the permit is submitted with the NPDES permit renewal application, including any dilution analysis to be considered during the permitting effort. Any dilution study to be considered should have been submitted with the renewal application at least 180 days prior to the expiration of the current permit. The DOH did not consider the new dilution at the time of permit processing as it had not been submitted. The permit was drafted on the best available information provided at the time of permitting in order for the processing of this permit to progress in a timely manner. If applicable, the MCBH may request a modification to this permit where new information can be considered and incorporated, as applicable.

The RPA and effluent limitations are based on the applicable water quality standards specified in HAR 11-54 and remain applicable until HAR 11-54 is revised to reflect any updated standards.

Also see response to U.S. Marine Corps Base comment No. 1.

3. Page 20 item D.2.e and Page 22, item D.2.f  
The determination that a reasonable potential exists to exceed water quality standards for ammonia nitrogen and nitrate + nitrite nitrogen is contradicted by the fact that the receiving waters in the vicinity of the Mokapu Ocean Outfall is not impaired. As the Fact Sheet, page 5, acknowledges "CWA Section 303(d) requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources." The Pacific Ocean off the Mokapu Peninsula is not identified in the Clean Water Act, Section 303(d) list of impaired water bodies in the 2012 303(d) list. At present, no TMDLs have been established for this waterbody."

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Additionally, the stated purpose of the Hawaii water quality standards for nitrate + nitrite and ammonia nitrogen is to prevent excess algal growth. EPA guidance on nutrient criteria recommends that total nitrogen be used as the measure of algal growth potential, instead of ammonia or nitrate + nitrite nitrogen. Per the DOH evaluation, the observed total nitrogen concentrations are in full compliance with State water quality standards at all stations for all years reviewed, providing supporting evidence that nitrogen levels are not problematic in the vicinity of the Mokapu Ocean Outfall discharge. While it is recognized that water quality standards for nitrate + nitrite and ammonia nitrogen exist and must be complied with, the absence of a larger nitrogen problem calls for more latitude in interpretation of reasonable potential for nitrate + nitrite and ammonia nitrogen.

**Response:** The 303(d) list may not reflect water quality within the immediate vicinity of the outfall. Reasonable potential was based on the monitoring results at the boundary of the Zone of Mixing, where water quality standards should be met. The maximum annual geometric mean of the monitoring results at the boundary of the Zone of Mixing showed exceedances of the water quality standards for ammonia nitrogen and nitrate + nitrite nitrogen, therefore establishing reasonable potential.

4. Page 22, top of page

The rational on the Permittee to conduct a ZOM dilution study to verify that assimilative capacity within the receiving waters exists for ammonia nitrogen contradicts the previous page in which an analysis of the nutrient levels at control stations MB1 and MB2 indicate assimilative capacity does exist.

**Response:** The goal of the ZOM dilution study is to determine the available dilution at the edge of the ZOM to better calculate end-of-pipe water quality-based effluent limitations. If the dilution remains unknown, then the DOH would use the known critical dilution of 185:1, which may be too conservative. Assimilative capacity analysis must be performed prior to the reissuance of every permit to determine if the previous permit determination is still valid or if the condition of the receiving water changed during the term of the permit.

5. Page 24, top of page

The rational on the Permittee to conduct a ZOM dilution study to verify that assimilative capacity within the receiving waters exists for nitrate + nitrite nitrogen contradicts the previous page in which an analysis of the nutrient levels at control stations MB1 and MB2 indicate assimilative capacity does exist.

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**Response:** The goal of the ZOM dilution study is to determine the available dilution at the edge of the ZOM to better calculate end-of-pipe water quality-based effluent limitations. If the dilution remains unknown, then the DOH would use the known critical dilution of 185:1, which may be too conservative. Assimilative capacity analysis must be performed prior to the reissuance of every permit to determine if the previous permit determination is still valid or if the condition of the receiving water changed during the term of the permit.

6. Page 25-27, Item D.2.i Enterococcus

DOH indicated that because human contact can occur in the Zone of Mixing (though infrequent) and in receiving waters where potential for acute illness from pathogens can occur, end of pipe limits for enterococcus has been established. This is not an adequate justification to establish an end of pipe limit for enterococcus. There is no justifiable basis for establishing water quality based enterococcus discharge limits in the permit because there is no reasonable potential that enterococcus concentrations in the KRWWTTP's effluent cause or contribute to an exceedance of the water quality standards based on the following:

- (a) the draft permit allows a Zone of Mixing.
- (b) the impact of the discharge to receiving water is measured by compliance with the applicable Federal and State Water Quality Standards that are protective of recreational use; and
- (c) DOH indicated that there are no exceedances of enterococcus at the edge of the ZOM

**Response:** Reasonable potential was established because the effluent concentration exceeded the criteria considering the known dilution at the time the permit was drafted. Further, as stated in the Fact Sheet, Section 3.3 of EPA's Technical Support Document for Water Quality-Based Toxics Control states that the regulatory authority should consider additional information discussed under Section 3.2 (i.e., type of industry, type of POTW, type of receiving water and designated uses, etc.) when evaluating reasonable potential. Although the TSD is specific to toxics, DOH believes this approach provides a reasonable determination for reasonable potential for other pollutants as well. Reasonable potential can be determined without effluent or receiving water exceedances of applicable water quality criteria. Because the facility is a POTW, and pathogens are characteristic of treated municipal wastewater, and the beneficial uses of the receiving water include

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recreation where human contact may occur, reasonable potential for enterococcus has been determined. To ensure the protection of human health, this permit establishes effluent limitations for enterococcus.

Also, nearshore monitoring requirements which set the monitoring stations at the boundary of the state recreational area, where the geometric mean of 35 CFU/ml applies were removed due to reasons provided by the City and County of Honolulu. Therefore the end-of-pipe limitation is important to determine compliance with the recreational standard.

7. Page 28, item k., paragraph

The reliance on the *T. gratilla* species to conduct WET testing as a compliance requirement is inappropriate for a number of reasons, including: (a) EPA only recently placed the guidance method for conducting Whole Effluent Toxicity Tests on the sea urchin *T. gratilla* in final form in April 2012; (b) DOH has only recently modified the test evaluation method under Part B.3. of the Permit to specify use of the Test of Significant Toxicity ("TST") approach; and (c) past results of the *T. gratilla* tests are inconsistent with WET test results using other permit-required test species (*Ceriodaphnia dubia*) which indicate that the effluent does not contain evidence of unacceptable toxicity.

**Response:** The previous permit required WET testing for *Ceriodaphnia Dubia* for compliance with WET requirements and *T. gratilla* as a trigger to perform additional testing TIE/TRE because the method was not published. After examining the results of the *Ceriodaphnia Dubia* testing, it was found that there was no reasonable potential to exceed limitations for WET tests performed using this species and therefore it was not included in the permit. Effluent data from the discharger indicates that *T. gratilla* is the more sensitive species to the potential toxics with the Discharger's effluent. Further, *T. gratilla* is a local species that is more representative of the aquatic species that will be impacted by the Discharger's effluent. Because this species is more sensitive, it is more appropriate to evaluate compliance with the narrative criterion specified in HAR, Chapter 11-54-4(b)(2).

The method was published in April 2012. It has been subjected to EPA's peer and administrative reviews and has been approved for publication as an EPA document. The method is specified for use in HAR, Section 11-54-10. For improved WET analysis, DOH has begun implementing EPA's Test of Significant Toxicity Method (TST) for WET effluent limitations within the State. The method is specified for use



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in HAR, Section 11-54-10. Further, recent use of the TST method does not demonstrate the use of the TST method as “inappropriate”.

This is consistent with other NPDES permits issued since the T. gratilla test method has been published.

8. Page 33, Part E.1. Table F-9  
The title “ZOM Monitoring Data” to Table F-9 is misleading since the numbers reported under the column, “Maximum Reported Concentration” appears to be effluent concentrations of the various monitoring parameters.

**Response:** As stated in the Fact Sheet, the maximum reported concentrations shown in Table F-9 are effluent quality monitoring results that were provided in the ZOM application.

9. Page 36, Table F-12  
The data entries for turbidity for stations M2 and M5 and chlorophyll a for station M6 in the Table F-12, Offshore Monitoring Stations are inconsistent with the data entries in Table F-11 of the Fact Sheet, Offshore Monitoring Stations for the Kailua Regional Wastewater Treatment Plant dated January 16, 2014.

**Response:** The numbers shown in Table F-12 of the MCBH Fact Sheet are correct.

**DRAFT PERMIT**

10. Page 3, Part A.1, 2<sup>nd</sup> Table of Effluent Limitations and Monitoring Requirements  
Delete discharge limitations for enterococcus. It is inappropriate and unjustifiable for DOH to impose numerical effluent limitations for enterococcus. Also see comment #6.

**Response:** As stated in the Fact Sheet, Section 3.3 of EPA’s Technical Support Document for Water Quality-Based Toxics Control states that the regulatory authority should consider additional information discussed under Section 3.2 (i.e., type of industry, type of POTW, type of receiving water and designated uses, etc.) when evaluating reasonable potential. Although the TSD is specific to toxics, DOH believes this approach provides a reasonable determination for reasonable potential for other pollutants as well. Reasonable potential can be determined without effluent or receiving water exceedances of applicable water quality criteria.

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Because the facility is a POTW, and pathogens are characteristic of treated municipal wastewater, and the beneficial uses of the receiving water include recreation where human contact may occur, reasonable potential for enterococcus has been determined. To ensure the protection of human health, this permit establishes effluent limitations for enterococcus.

Also, see comment #6.

11. Page 4, Part A.1, 2<sup>nd</sup> Table of Effluent Limitations and Monitoring Requirements, footnote #7  
Correct the reference. The current approved membrane filter test method is the 2009 version (Method 1600: Enterococci in Water by Membrane Filtration Using membrane-Enterococcus Indoxyl- $\beta$ -D-Glucoside Agar (mEI), EPA-821-R-09-016).

**Response:** Footnote revised as requested.

12. Page 4, Part A.1, 3<sup>rd</sup> Table of Effluent Limitations and Monitoring Requirements  
Delete discharge limitations for ammonia nitrogen and nitrate + nitrite nitrogen. It is inappropriate and unjustifiable for the Department of Health to impose numerical effluent limitations for ammonia nitrogen and nitrate + nitrite nitrogen. Also see comment #3.

**Response:** The methodology to determine reasonable potential is consistent with the methodology used for other permits. The fact sheet provides a comparison of annual geometric means to applicable water quality standards. Annual geometric means represent a reasonable period to observed season variations within the receiving water, and determine negative impacts on the receiving water (exceeding water quality standards at the edge of the ZOM). Annual geometric means of each zone of mixing station at each depth was compared to the water quality standard. An exceedance of water quality standards at the edge of the ZOM indicate that the discharger is causing or contributing to the exceedance of a water quality standard. Based on the effluent data, the discharger is discharging ammonia nitrogen and nitrate + nitrite nitrogen and the receiving water has been shown to be impaired at the edge of the mixing zone, thus they are at a minimum contributing to an exceedance, and therefore have reasonable potential for these pollutants. NPDES regulations at 40 CFR 122.44(d) require permits to include WQBELs for pollutants that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an exceedance of a water quality standard. As specified in

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40 CFR 122.44(d)(1)(i), permits are required to include WQBELs for all pollutants “which the Director determines are or may be discharged at a level that will cause, have reasonable potential to cause, or contribute to an excursion above any state water quality standard.” The receiving water data collected by the City was used in the determination of the maximum annual geometric mean.

Applicable effluent limitations for ammonia nitrogen and nitrate + nitrate nitrogen have been included in the proposed permit based on the requirements and HAR 11-54 and 11-55. The use of single sample maximums in the proposed permit is based on observed facility performance (i.e., highest measured values during the last several years), and is being applied to maintain the current performance demonstrated by the Permittee over the last several years to minimize the potential for additional exceedances of water quality standards at the edge of the ZOM. Because an applicable dilution is not currently known for the edge of the ZOM, water quality-based effluent limitations using a dilution and water quality criteria cannot be calculated. A requirement to evaluate the dilution and assimilative capacity has been established in the permit, and may be used during future permitting efforts to calculate appropriate end-of-pipe effluent limitations. Until that information is available, maintaining the current performance of the facility, and evaluating compliance at the edge of the ZOM is reasonable to protect water quality and implement water quality standards without establishing direct end-of-pipe effluent limitations for ZOM parameters without dilution (since one is not known), or initial dilution (which may be overly stringent at the edge of the ZOM).

Also see Response to U.S. Marine Corps Base Hawaii comment #4.

13. Page 6, Part A.3

Delete the requirement for interim discharge limitations for enterococcus, all tasks and compliance dates related to the requirement, and the compliance schedule for complying with the final enterococcus discharge limitation including the compliance dates. There is no reasonable potential concern to establish WQBEL for chlordane. Also see comment #6.

**Response:** See response to comments #6 and #10.

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14. Page 14, Part B.6, last paragraph

Delete paragraph. As worded, the paragraph requires that the Permittee incorporate comments from the Director within 14 calendar days of the plan submittal regardless of whether or not comments are received from the Director.

**Response:** Paragraph remains as the intent is that the Permittee incorporate all comments received from the Director within 14 days of the TIE plan submittal. If there are no comments from the Director, the TIE plan should be implemented as proposed.

15. Page 21, Part E.1

Delete ZOM Dilution Analysis Study. Also see comments #2, #3, #4 and #5.

**Response:** See responses to comments #2, #3, #4 and #5.

16. Page 40, Part I.5

Delete requirement that “any” planned alterations or additions be reported quarterly. This requirement for reporting any “planned changes,” no matter how minor, will impede normal operation and maintenance activities of the facility.

**Response:** This requirement is for “reporting” or notification only. This requirement is standard in recently issued NPDES permits.

17. Appendix 1, Monitoring Methods, Pages 1-4

Recommend the various methods identified in the column entitled “Analytical Method” be revised to state “As specified in 40 CFR 136”.

**Response:** Permit has been revised to state, “As specified in 40 CFR 136”.

### **Final Determination**

The DOH has taken the comments received into consideration and has made the necessary amendments to the subject documents. There were no substantive changes made to the proposed permit, therefore, DOH intends to issue the proposed permit with the revisions.

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